

REMARKS**Claim Rejections under 35 U.S.C. § 102(e)**

Reconsideration of the rejection of claims 1-11, 13-17, 24, 25, 29-32, and 38-40 under 35 U.S.C. § 102(e) as being anticipated by Liess et al. (U.S. Patent No. 6,707,027) is respectfully requested.

Claim 1

Reconsideration of the rejection of claim 1 under 35 U.S.C. § 102(e) as being anticipated by Liess et al. is respectfully requested. Claim 1, as amended to incorporate canceled claim 26, is directed to a data input device for use with a tracking surface having light-scattering properties, said device comprising:

a single laser having a cavity from which a light beam is projected, said laser being configured to project the light beam onto said tracking surface, at least a portion of the light beam striking said tracking surface reflecting back into the cavity of said laser and thereby altering at least one characteristic of the projected light beam, **wherein said projected light beam is reflected from a reference surface acting as a field stop for limiting direct detection of light reflected from the tracking surface prior to said detecting;**

a detector associated with the laser for detecting said altered characteristic of the light beam projected by the laser; and

a controller responsive to the detector for determining the relative distance between said device and said tracking surface as a function of the altered characteristic of the projected light beam detected by the detector.¹

None of the references, taken individually or in combination, discloses or suggests these novel elements. To anticipate a claim, each and every element of the claim must be found, either expressly or inherently described, in a single prior art reference.² Without teaching each element, Liess et al. cannot anticipate claim 1. Here, the addition of a reflection from a reference surface for limiting detection of light directly reflected from the tracking surface provides the benefits discussed by Applicants in the application. According to this method, the light beam detected is reflected from the reference surface, and any light reflected by the tracking surface is not detected. The reference surface acts as a field stop, limiting light from directly reflecting from the tracking surface to the detector. Detecting only light reflected by the reference surface helps minimize any noise or signal aberrations introduced by features of the tracking surface. In

¹ (emphasis added).

other words, without reflection by a reference surface, reflected light from the tracking surface or ambient light reflected between the device and the tracking surface can reach the detector, thereby increasing the noise in detected signals. With reflection by a reference surface, however, the noise or signal aberrations introduced by the tracking surface are minimized. Without a teaching for such reflecting from a reference surface, Liess et al. cannot anticipate amended claim 1.

In the present action, the Office asserts Mooney et al. (U.S. Patent No. 4,477,890) teaches such a claimed reference surface. But Mooney et al. fail to teach or suggest this claimed element, and therefore the Office has failed to set forth a *prima facie* case of obviousness. In particular, claim 1 requires that the reference surface act as a field stop for **limiting direct detection of light reflected from the tracking surface**. In other words, the reference surface must not allow detection of light **directly** from the tracking surface, thereby minimizing noise or signal aberrations introduced by the tracking surface. Mooney et al. disclose a field stop 32 with a small aperture for limiting the amount of light striking the photodetector 38, but the field stop clearly allows light to **directly** strike the photodetector from the glass master 16, or tracking surface. This teaching does not show the feature of claim 26, which requires that the field stop limit **direct** detection of light reflected from the tracking surface. In Mooney et al., the diagram of Fig. 2 clearly shows that light travels **directly** from the glass master 16, or tracking surface, to the photodetector 38 through the small aperture of the field stop. Because the Office has not provided a reference that teaches each and every element of the claim, the Office's has failed to establish a *prima facie* case with respect to claim 1.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1. Claims 2-17, which depend directly or indirectly from claim 1, are submitted as patentable for the same reasons as set forth above with respect to claim 1. Independent claims 18, 24, and 38 have been amended and are allowable for at least the same reasons as claim 1. Claims 19-23, 25, 27-37, 39 and 40 which depend directly or indirectly from one of claims 18, 24, and 38 are submitted as patentable for the same reasons as set forth above with respect to claim 1.

²M.P.E.P. § 2131.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 12 and 33-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Liess et al. Claims 12 and 33-37 depend directly or indirectly from claims 1 and 24 and are submitted as patentable for the same reasons as set forth above with respect to claims 1 and 24.

Claims 18-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Liess et al. in view of Kinrot (U.S. Patent No. 6,741,335 B2) et al. The office asserts that Kinrot teaches a laser oriented substantially perpendicular to the tracking surface. However, Kinrot, alone or in combination with the other reference fails to teach or suggest a single laser having a cavity from which a light beam is projected, the **projected light beam being reflected from a reference surface acting as a field stop for limiting direct detection of light reflected from the tracking surface prior to the detecting** as recited in claim 18. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 18. Claims 19-23, which depend directly or indirectly from claim 18, are submitted as patentable for the same reasons as set forth above with respect to claim 18.

Claims 26-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Liess et al. in view of U.S. Patent No. 4,477,890 (Mooney et al.). Claim 26 has been canceled and claim 27 and 28 depend directly or indirectly from claim 24 and are submitted as patentable for the same reasons as set forth above with respect to claim 24.

In view of the foregoing, favorable reconsideration and allowance of this application is requested.

The Applicants wish to expedite prosecution of this application. If the Examiner deems the claims not in condition for allowance, the Examiner is invited and encouraged to telephone the undersigned to discuss making an Examiner's amendment to place the claims in condition for allowance.

The Commissioner is authorized to charge Deposit Account No. 19-1345 for a one-month extension of time.

Respectfully submitted,

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